SEATTLE CITY LIGHT
VEGETATION MANAGEMENT PLAN
EASTSIDE TRANSMISSION LINE

FOR

CRITICAL AREAS LAND USE PERMIT
CITY OF BELLEVUE

SEATTLE CITY LIGHT
ENVIRONMENTAL AFFAIRS DIVISION

JANUARY 2021

ACCEPTANCE STATEMENT

This Vegetation Management Plan has been prepared by Seattle City Light in cooperation with the City of Bellevue as a condition for a programmatic critical areas land use permit for managing vegetation in critical areas or critical area buffers within City Light's transmission line through Bellevue. This VMP conforms to performance standards for vegetation management stipulated in the City of Bellevue's Land Use Code at 20.25H.055.C.3.i. It has been prepared for a CALUP for 2021 and 2023 for vegetation management work within critical areas excluded by the City of Bellevue in the Clearing and Grading permit authorizing clearing outside of those areas included in this plan.

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ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
BMP	best management practice
Ecology	Washington State Department of Ecology
FERC	Federal Energy Regulatory Commission
GIS	Geographic information system
kV	kilovolt
NERC	North American Electric Reliability Council
NRCS	Natural Resources Conservation Service
PHS	Priority Habitats and Species
ROW	Right-of-way
City Light	Seattle City Light
TVMP	Transmission Vegetation Management Program
USDA	United States Department of Agriculture
WDFW	Washington Department of Fish and Wildlife
WECC	Western Electricity Coordinating Council

1.0 INTRODUCTION

Seattle City Light (City Light) owns and operates 657 miles of transmission line and manages more than 5,000 acres of associated right-of-way easement (ROW) in western Washington. City Light's 230-kV Eastside Transmission Line extends 32.5 miles from the Bothell Substation in Snohomish County, south into King County, and onto the Maple Valley Substation near Renton. The line runs through the cities of Bothell, Kirkland, Bellevue, Newcastle, and Renton, as well as parts of unincorporated King County. Approximately 7.3 miles of the Eastside Line (Mile 14.5 to 21.8) are within Bellevue. The ROW traverses several parks and open areas east of Interstate (I)-405, including Wilburton Hill Park and relatively steep forested slopes south of the Lake Hills Connector and Kelsey Creek.

While the primary purpose of the ROW for the Eastside Line is to provide a corridor for the safe transmission of electricity, it also serves several other uses that benefit the community and the environment. Portions of the ROW through Bellevue provide recreational opportunities, including trails, parks, and open spaces, that might otherwise not exist. In some locations, the ROW supports the only areas of native plant communities and wildlife habitat remaining in what is an otherwise highly developed urban setting. The ROW also serves as a movement corridor for wildlife between more highly developed areas that possess little habitat.

This Vegetation Management Plan (VMP) was developed to comply with the City of Bellevue (Bellevue) land use code (LUC). This VMP applies to four segments within the 7.3 miles of the ROW within Bellevue that are within critical areas or critical area buffers and thus excluded from the clearing and grading permit authorizing City Light's routine vegetation management activities in portions of the ROW outside of critical areas or critical area buffers.

Vegetation management is an allowed use in ROW's subject to applicable performance standards (LUC 20.25H.O55.B). City Light's vegetation management within critical areas or critical area buffers is not considered routine maintenance under Bellevue's LUC. This VMP is intended to meet the provisions in LUC 20.25H.C.3.i. A summary of the relevant portions of this subsection of the LUC are paraphrased as follows:

i. Noxious Species, including English ivy (*Hedera helix*), Himalayan blackberry (*Rubus armeniacus*), and evergreen blackberry (*Rubus laciniatus*) may be removed using hand labor and hand-operated equipment from a critical area buffer without a Critical Areas Land Use Permit or VMP.
ii. Hazard Trees likewise may be removed from critical areas or critical area buffers without a Critical Areas Land Use Permit or VMP, provided other applicable provisions of this subsection are met, such as documenting the hazard to the Director using the appropriate form prepared by a certified arborist or as otherwise stipulated; removed vegetation is left on within the critical area or critical area buffer; and removed trees are replaced (as applicable).
iii. To protect forest health from the spread of disease or damaging insects or control fire, diseased or infested vegetation may be removed provided the removed

vegetation is replaced subject to a restoration plan conforming to LUC 20.25H.210.

iv. This subsection allows vegetation removal when required to comply with International Fire Safety Code, Section 304.1.2 as adopted and amended by Bellevue provided the removed vegetation is replaced subject to a restoration plan conforming to LUC 20.25H.210.

v. This subsection indicates that vegetation removal is allowed in critical area or critical area buffers as part of an ongoing routine maintenance plan for utility projects subject to the VMP meeting the requirements of subsection B of this section.

B. The VMP shall include:
   (1) A description of existing site conditions, including existing critical area functions and values;
   (2) A site history;
   (3) A discussion of the plan objectives;
   (4) A description of sensitive features;
   (5) Identification of soils, existing vegetation, and habitat associated with species of local importance present on the site;
   (6) Allowed work windows;
   (7) A clear delineation of the area within which clearing and other vegetation management practices are allowed under the plan; and
   (8) Short- and long-term management prescriptions, including restoration and revegetation requirements. Cleared areas shall be restored and revegetation with native species to the extent such vegetation does not interfere with the function of the allowed structure, trail, facility or system.

vi. This subsection specifies that the Director may approve vegetation replacement in a critical area buffer, or within a geologic hazard critical area pursuant to a VMP. There are also provisions for including pruning techniques and timing in the VMP for activities within geologic hazard areas and geologic hazard area buffers per subsection C.3.i.vii of this section and a modified version of subsection C.3.i.v.(B)(8).

vii. This subsection identifies under what conditions select vegetation pruning may occur within a geologic hazard critical area or geologic hazard critical area buffer with hand labor and hand-operated equipment without a CALUP or a VMP.

1.1 Description of Proposed Work Areas

As noted above, most of the work this maintenance cycle (2021) is outside of critical areas and critical area buffers. Limited work is within critical areas (steep slopes, floodplain, shorelines, wetlands or buffers). Except for mowing of blackberry in selected locations, all vegetation management is pruning or removal of trees by hand or hand-operated tools. Most vegetation management consists of hand removal of fast-growing deciduous tree species in steep slopes or select pruning of trees as indicated in more detail below in Table 1. In addition, some hand clearing of fast-growing deciduous trees is proposed within wetlands, shorelines, and floodplain near the Lake Hills Connector. Collectively, areas within polygons where work is planned in or

near environmentally critical areas total about 2 acres (88,675 sq.ft.). Because vegetation removal is not continuous within these polygons but rather clearing mostly by hand in a small proportion of these areas, actually vegetation removal is limited to only a small fraction of the work area. The total area within the 7.3-mile-long ROW within the City of Bellevue covers almost 133 acres. Proposed work is described in Table 1-1 and shown on Figures 1-2 through 1-6 comprise only about 1.1% of the total ROW and the actual amount of clearing is only a small fraction of this (likely a fraction of 1%).

Although there is currently a single row of towers, the ROW for the Eastside Line was designed to accommodate two parallel transmission lines and a double row of towers. Consequently, the one existing transmission line does not follow the center line of the ROW (Figure 1-1). The ROW is 150 feet wide and extends for 112 feet to the east of the transmission centerline and 38 feet to the west as depicted.

Table 1-1. Vegetation management areas subject to City of Bellevue LUC 20.25H.055.B

Segment of ROW	Length of Transmission Line (ft)	Approximate Area of ROW (ac)	Proposed Activity	Figure
Near Tower B15/17S (Cherry Crest)	~67	0.06	Side trim deodor cedar at 12346 NE 26th Pl. and remove fast-growing hardwood saplings[a] under lines by hand	1-2
Tower B17/15S to Lake Hills Connector (Wilburton)	~1,530	0.2	Remove fast-growing, hardwood saplings by hand	1-3
Tower B19/12S to B19/28S (Factoria)	~178	0.6	Mow blackberry to maintain access to towers	1-4,1-5
SE Coal Cr. Parkway to Tower B20/20S (Lake Heights)	NA	NA	Top trim 10% of 1 cypress, western red cedar, and bigleaf maple at 12314 SE 46th Ct.	1-6
Totals	**~2,555**	**1.1**		

[a] Fast-growing, hardwood saplings include willows (*Salix* spp.), red alder (*Alnus rubra*) and black cottonwood (*Populus balsamifera*).

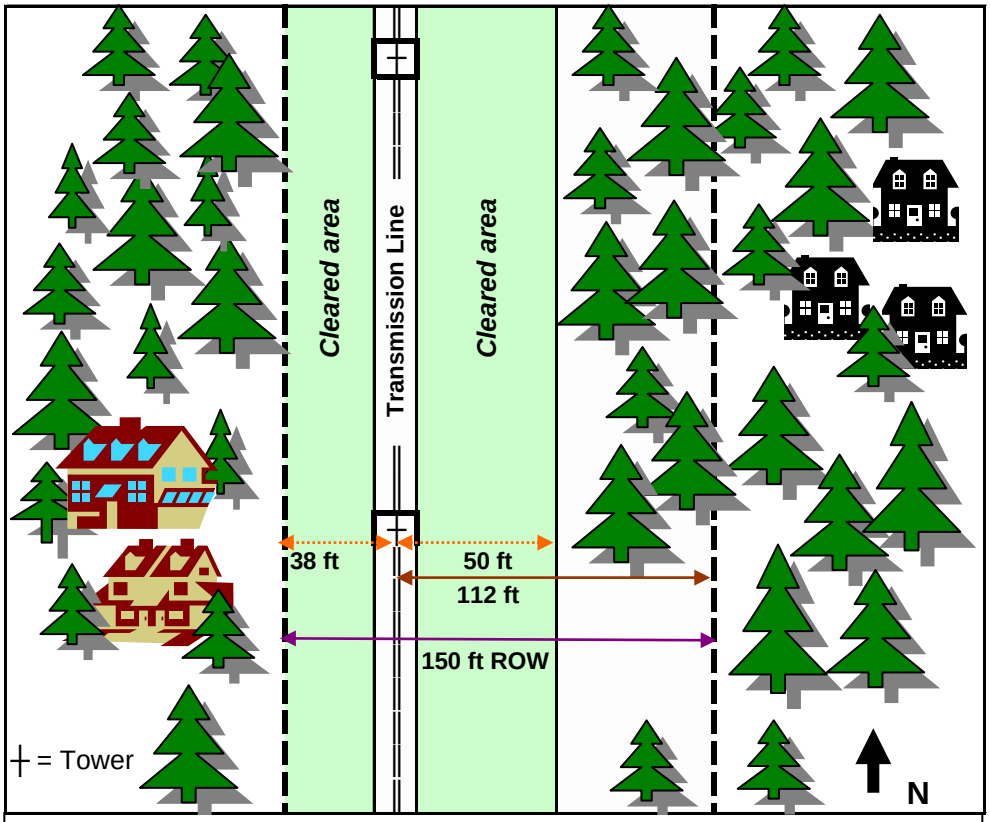

Figure 1-1. Schematic (plan view) of City Light's transmission line ROW and easement through Bellevue. Cleared area on east side of ROW averages 50 ft. in width and ranges from 38-62 ft.

1.2 Site History

Site history has not changed in the ROW within the last several decades since the Skagit Hydroelectric Project was completed. City Light has generally managed the vegetation within the transmission line corridor to reduce the potential hazards and provide safe, reliable electric power to our customers. In general, this has meant maintaining the stature of the forest to younger successional phases that do not include large trees or shrubs that could result in line outages and potentially hazardous or dangerous conditions to nearby residents, businesses, or wildlife that could result in electrocution and fires. As the areas surrounding the ROW have become increasingly developed since the Skagit Hydroelectric Project was completed, the importance of managing the vegetation to provide a safe environment to the surrounding community has only become more important. At the same time, City Light remains committed to manage the ROW with a light touch to provide water quality, hydrologic, habitat and other functions and values associated with the natural environment beneath the transmission lines.

1.3 Existing Conditions

Existing conditions within the various segments are briefly described including dominant plant

species and general vegetation structure, functions and values for the different critical area types. As the functions and values are generally the same for the different critical areas, the descriptions below apply to all the segments where vegetation management is proposed to avoid repetition of the same information. Table 1-2 summarizes existing condition for each ROW segment:

Table 1-2. Summary of existing conditions within vegetation management areas.

Segment of ROW	Critical Area	Vegetation/Habitat Quality	Soils[1]	Streams	Comments
Near Tower B15/17S (Cherry Crest)	Steep Slopes (40%)	Mixture of non-native and invasive species	Alderwood gravelly sandy loam	Unnamed Asphalt Ditch along NE 26th Pl	See Figure 1-2 and Appendix A
Tower B17/15S to Lake Hills Connector (Wilburton)	Steep Slopes Shorelines Wetlands Floodplain	Mix of young deciduous forest and invasive species	Alderwood gravelly sandy loam	Kelsey Cr. Wilburton Trib.[2]	See Figure 1-3 and Appendix A
Tower B19/12S to B19/28S (Factoria)	Steep Slopes (40%)	Mix of native and invasive forest assemblages	Alderwood gravelly sandy loam; Bellingham silt loam;	None	See Figures 1-4, 1-5 and Appendix A
SE Coal Cr. Parkway to Tower B20/20S (Lake Heights)	Steep Slopes (40%)	Highly developed with some areas of native but primarily landscaped vegetation	Alderwood gravelly sandy loam	Coal Cr.	See Figure 1-6

[1] Soils within the ROW as mapped by the NRCS Web Soil Survey (accessed online January 13, 2021);
[2] Wilburton Tributary is variously referred to as non-fish bearing and potentially fish bearing in the City of Bellevue's GIS data (see Figure 1-3); Kelsey Creek is fish bearing

For more general information on the geology, topography, soils and western hemlock zone vegetation found within this portion of the Puget Trough Physiographic Province, please refer to City Light's 2010 Vegetation Management Plan, which is in the City of Bellevue's files.

1.3.1 Geologically Hazardous Areas - Slopes Greater Than 40 Percent

All four segments of City Light ROW contain or are near steep slopes greater than 40% grade. Soils may be of variable character (e.g., permeability and other physical and chemical properties) but all have evolved following retreat of the Cordilleran icecap during the last glacial epoch about 14,000 years ago.

According to the NRCS (Web Soil Survey, accessed online January 13, 2021), soils on mapped slopes greater than 40% (see Figures 1-2 through 1-6) are predominantly gravelly sandy loams that have developed in glacial till, particularly Alderwood series, which generally have relatively high permeability and infiltration rates and contribute to recharge of shallow groundwater resources and base flow in streams. Areas mapped as Alderwood may contain inclusions of up to percent of hydric (wetland) soil types, according to the NRCS.

Existing managed vegetation on steep slopes has prevented erosion, such as rill and gully formation or mass wasting. Undisturbed, vegetation on soils in undeveloped areas, such as those in the ROW, help to protect water quality and quantity (hydrology) in wetlands and streams by preventing erosion and delivery of sediments to these resources. The level of those functions depends on the land uses within the larger contributing watershed areas of the associated wetlands and streams.

As the ROW generally comprises only a small fraction of the total contributing area to the Wilburton Tributary (see Figures 1-3), Kelsey Creek and associated wetlands, these functions are proportionately small. By contrast, the relative high proportion of developed land uses (especially impervious surfaces) within the watersheds of these critical areas generally contribute to adverse effects on wetlands and aquatic resources via stormwater runoff. In other words, the managed vegetation within the ROW and undisturbed soils help to prevent erosion and mass wasting on slopes greater than 40 percent and protect water quality and hydrology of wetlands and streams.

In addition to providing water quality and hydrologic functions, vegetation in the ROW provides habitat to plants and animals commonly found in urban areas. The managed vegetation within the ROW also provides corridors for wildlife movement to other patches of undeveloped habitat, helping to maintain populations of plants and animals found there. "As described in the 2003 Bellevue Critical Areas Update Best Available Science Paper: Wildlife (City of Bellevue, 2003) riparian areas and forested steep slopes comprise the majority of Bellevue's remaining habitat corridors and linkages."

1.3.2 Vegetation/Habitat Quality

The habitat quality within these areas varies depending on the vegetation structure in the ROW and adjacent areas. Much of the ROW between tower B15/17S and the north end of NE 24th St (Cherry Crest) as shown in Figure 1-2 and photographs in Appendix Ais characterized by a mixture of landscaping, fast-growing native hardwoods and dense non-native and invasive species (e.g., Himalayan blackberry, Scot's broom, English ivy, and cherry laurel). Patches of mature Douglas fir forest occur in the border zone but these are highly fragmented by residential development. This habitat likely supports populations of resident and migratory songbirds and small mammals (e.g., raccoon, opossum, rats, shrews, moles) commonly found in such habitat.

Habitat quality between tower B17/15S and the Lake Hills Connector also is a mixture of native, non-native and invasive species (Figure 1-3). The large green spaces in Wilburton Park and the Bellevue Botanic Gardens in the adjacent border zones provide some of the better native forest associations remaining in the City though high pedestrian use. These habitats likely support a somewhat more diverse assemblage of native fauna but still primarily those songbirds and small mammals commonly found in urban areas that are adapted to relatively high levels of human activity.

Within the ROW, the steep slopes between towers B17/15S and wetlands in and adjacent to Kelsey Creek and the Lake Hill Connector contain a mix of native and invasive plant species. (see Figure 1-4). Dense patches of invasive species, such as Himalayan blackberry and one-seed

hawthorn are common but assemblages of native plant associations also are present. Willows, cattails, and other wetland dependent, native plants are common. Other fast-growing, deciduous species, including black cottonwood and red alder also are common (see photographs in Appendix A). Snags in the border zone provide foraging and nesting habitat for woodpeckers and other cavity dependent songbirds. Wetlands provide breeding, feeding, and resting habitat for amphibians and other wetland dependent flora and fauna.

Habitat from tower B19/12S to B19/28 (Factoria) is highly fragmented and abuts Factoria Mall on the east side and I-405 and residential development on the west side (see Figure 1-4). In addition, vegetation is comprised primarily of small patches of landscaping adjacent to residences in the border zone and non-native and invasive vegetation in the wire zone, including dense stands of Himalayan blackberry similar to those shown around tower B19/28S in Appendix A. This habitat has relatively low function given the dominance of non-native species and highly fragmented habitat adjacent to the interstate highway and dense commercial, and residential development.

Habitat between SE Coal Creek Parkway and Tower B20/20S includes the greenbelt around Coal Creek. Mature forest on the slopes surrounding the creek include bigleaf maple, Douglas fir, western red cedar, western hemlock in the forest canopy and an understory of native and invasive shrubs, forbs and vines. This forest provides shade, large woody debris, and allochthonous inputs (e.g., leaf litter) to Coal Creek, which supports resident and anadromous fishes (see below) and other aquatic biota. Forested habitat also supports small mammals, songbirds, raptors, amphibians and reptiles common to Puget Lowland forests. Landscaped areas around residential development in the Lake Heights neighborhood provide less functional habitat.

The LUC 20.25H.150.A identifies 23 species of fish and wildlife as species of local importance, including a number of bird and bat species, which may forage within or above habitat on steep slopes. Although the WDFW's Priority Habitats and Species Database (PHS) there are no records of observations of any priority wildlife species within the transmission line ROW through Bellevue (data accessed online January 21, 2021) and no nests or roosts of these species of local importance were observed during site reconnaissance surveys completed by City Light biologists, it is likely that some priority wildlife, particularly birds such as the bald eagle (*Haliaeetus leucocephalus*) pileated woodpecker (*Dryocopus pileatus*), and great blue heron (*Ardea herodias*), use habitats in and near the Eastside ROW at least occasionally. Pileated woodpecker, red-tailed hawk (*Buteo jamaicensis*) western big-eared bat (*Plecotus townsendii*), Vaux's swift (*Chaetura vauxi*) and bat (*Myotis spp*.) species may forage in or over forested habitat on steep slopes and around KelseyCreek and Coal Creek and roost in trees within the ROW or adjacent to it.

Eastside Transmission Line

City of Bellevue

Imagery: King County 2019

Seattle City Light

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1:1,600 1 inch = 133 feet

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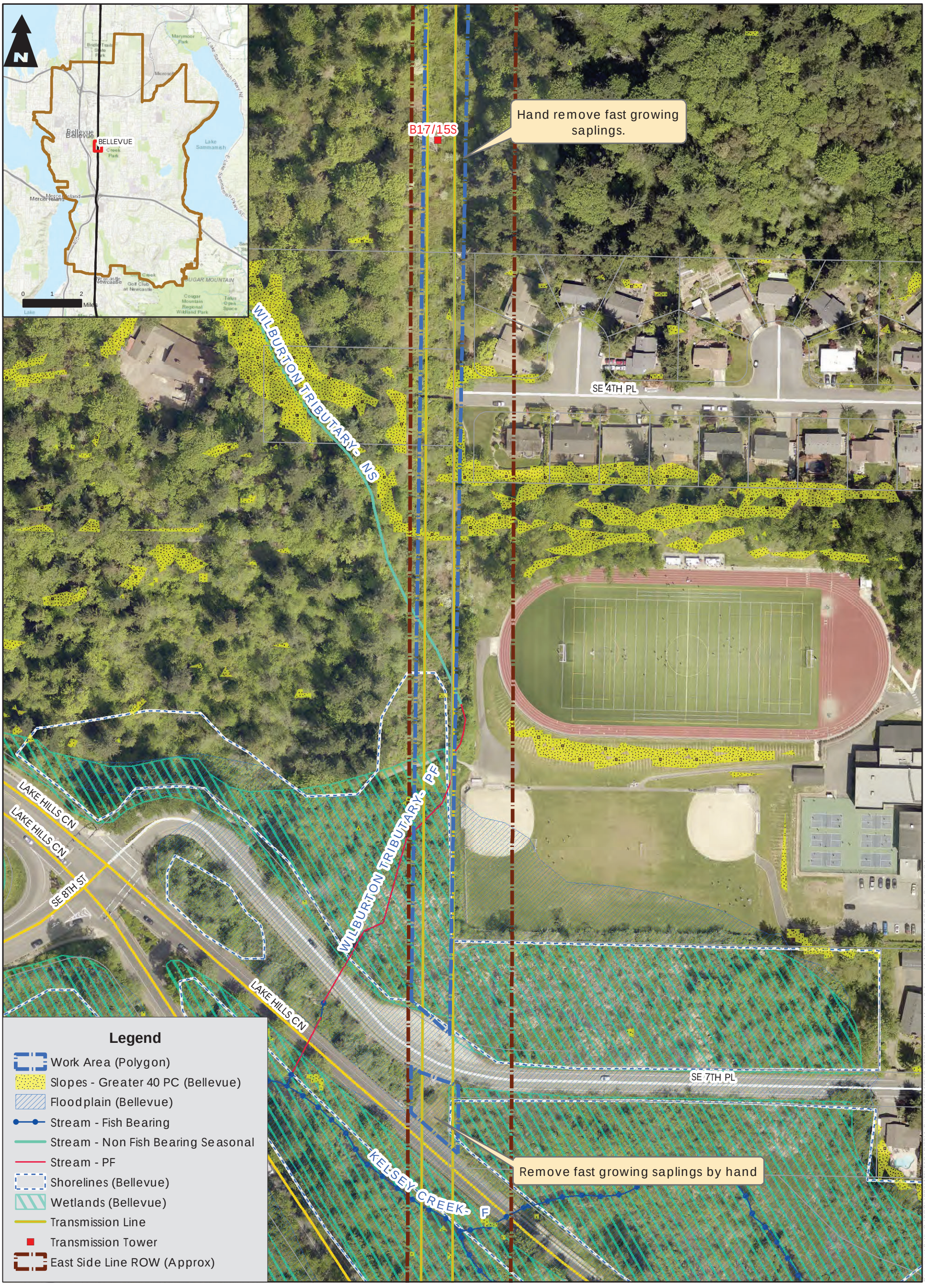

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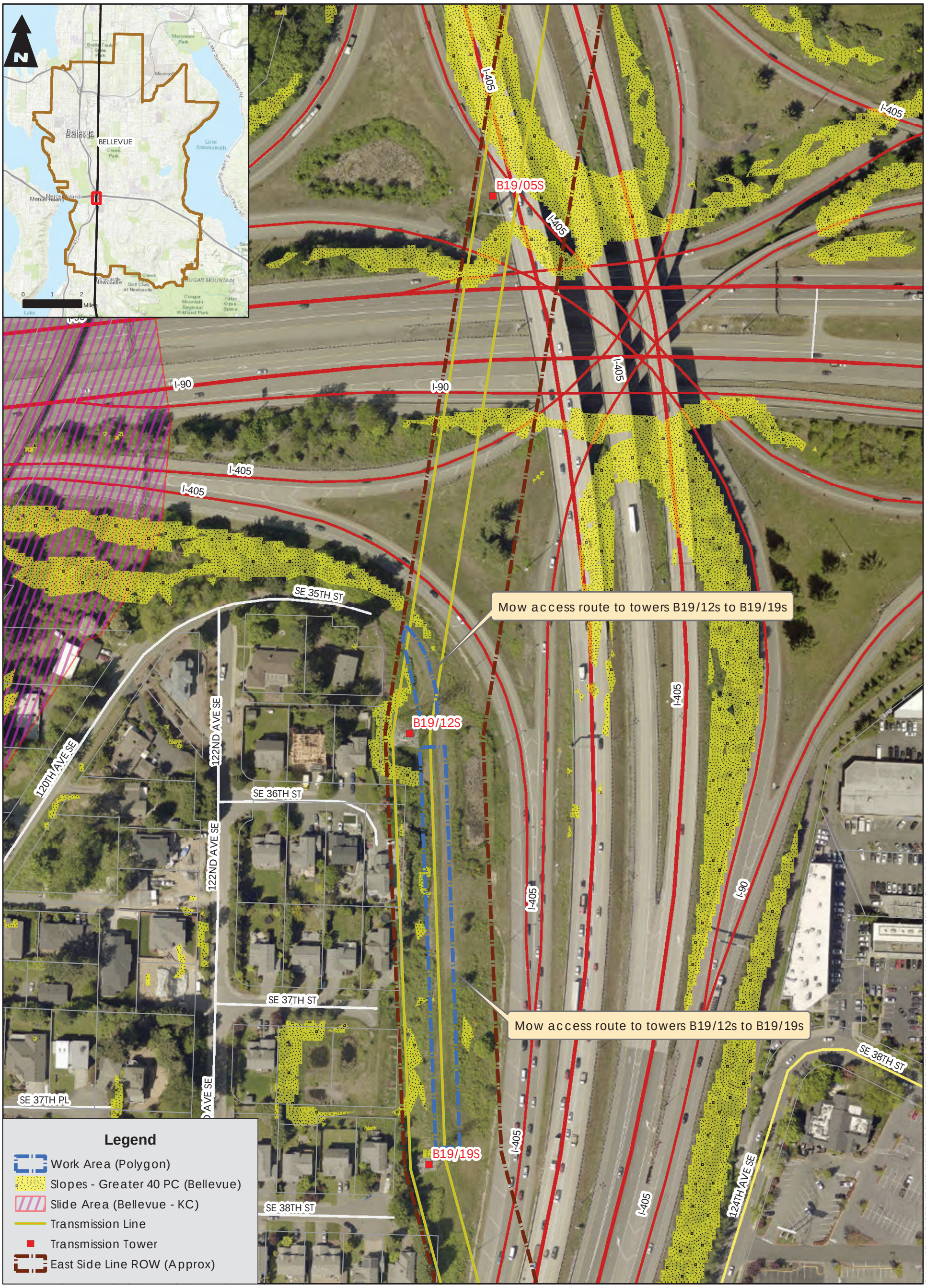

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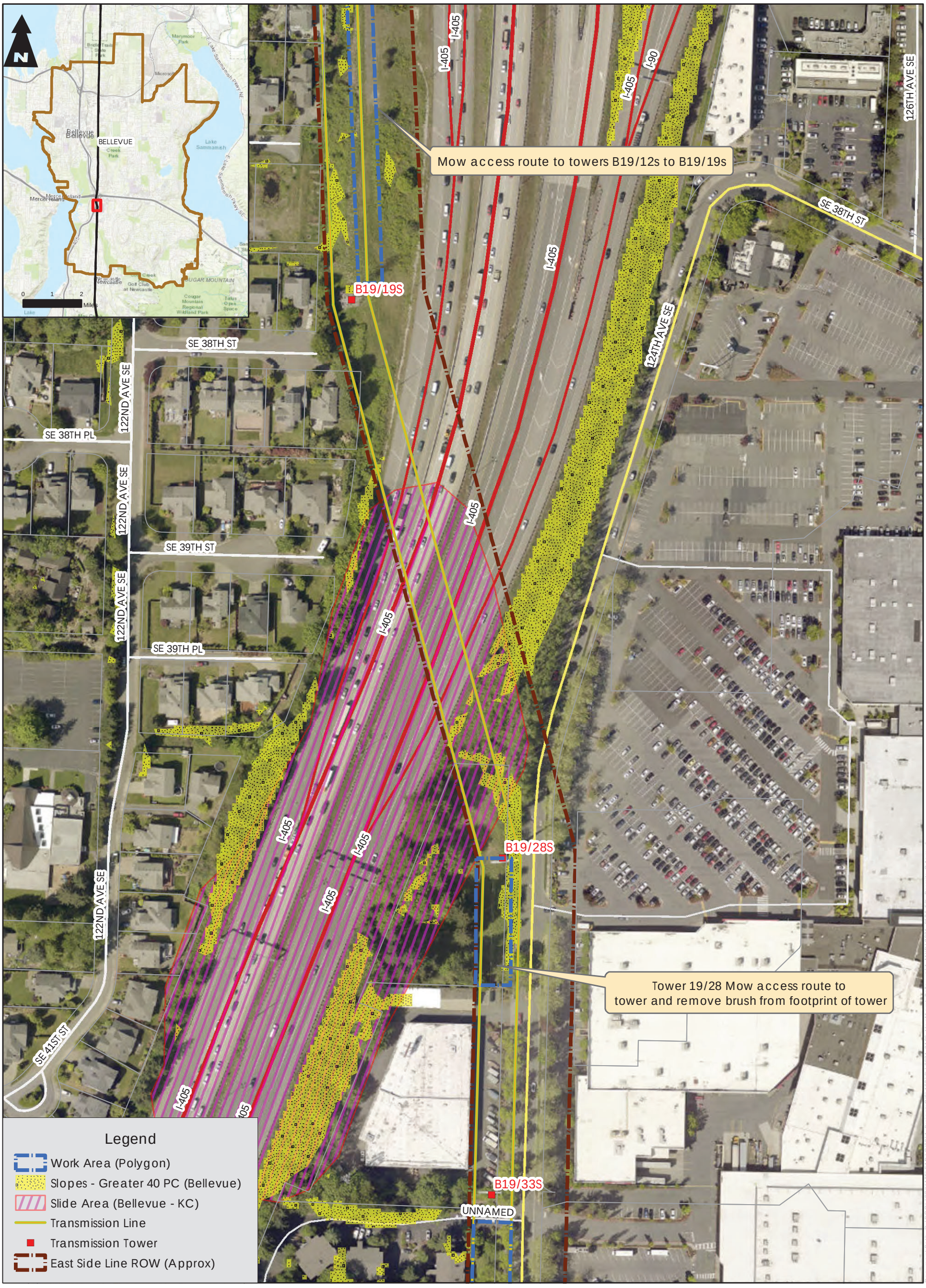

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Eastside Transmission Line

City of Bellevue

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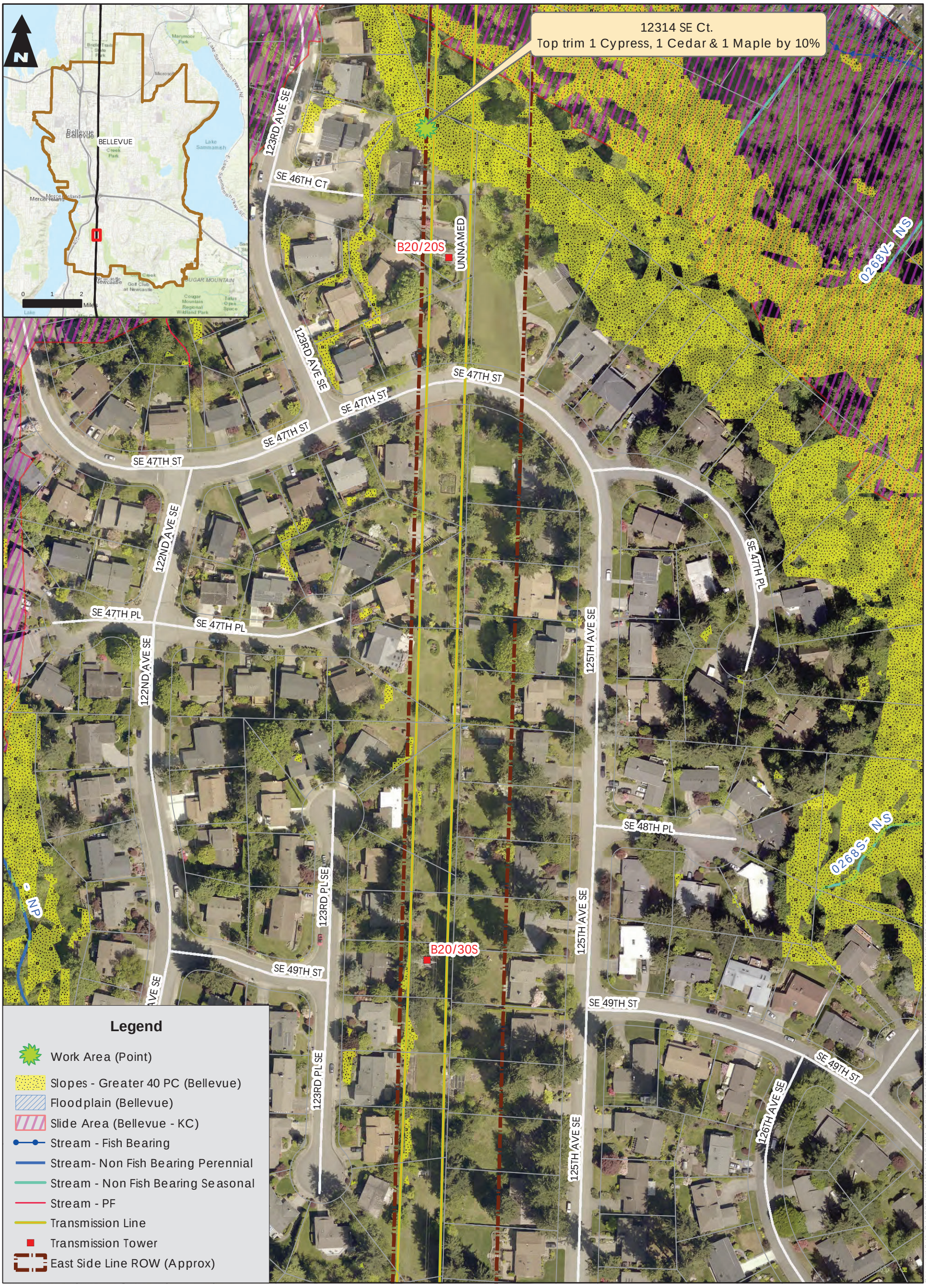

Eastside Transmission Line

City of Bellevue

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1.3.3 Wetlands and Streams

Soils in wetlands and the floodplain of Kelsey Creek are mapped as Bellingham silt loam. Bellingham silt loam is a hydric soil and may contain up to 3 percent inclusions of other hydric soils, according to the NRCS. Hydric Bellingham silt loam soils are mapped near Kelsey Creek and the Lake Hills Connector.

Slope wetlands and a couple of streams are present in the area where some of the proposed vegetation management would occur. Wilburton Tributary originates on the slopes of the Bellevue Botanical Garden as a non-salmonid stream (see Figure 1-3). Near the Bellevue International School, the stream enters the Hyak Jr. High School Wetland and then flows into Kelsey Creek. The lower end of the tributary is identified as a possible fish-bearing stream by the City of Bellevue GIS data.

The Eastside transmission line crosses Kelsey and Coal creeks, which both support populations of native salmonids. According to the WDFW's PHS data on the web, both Kelsey Creek and Coal Creek support populations of coho (*Oncorhynchus kisutch*), sockeye (*O. nerka*), and Chinook salmon (*O. tschawytscha*), winter steelhead (*O. mykiss*), and resident cutthroat trout (*O. clarki*). Chinook salmon and winter steelhead are both federally-listed as threatened species. PHS data were accessed on January 21, 2021. Both creeks also likely support non-salmonid fish species such as sculpins (*Cottus* spp.), dace *(Phoxinus neogaeus*), stickleback (*Gasterosteus aculeatus*), and lampreys (*Lampetra* spp.).

Although both Kelsey Creek and Coal Creek support populations of anadromous and resident salmonids and other aquatic biota, both are on the Washington State Department of Ecology's (Ecology) 303(d) list for some water quality parameters. Kelsey Creek is on the 303(d) list for three parameters, dissolved oxygen, temperature, and fecal coliform bacteria, according to water quality data in Ecology's Water Quality Atlas accessed online on January 21, 2021 at https://apps.ecology.wa.gov/waterqualityatlas/wqa/map. Coal Creek is on the 303(d) list for dissolved oxygen and a degraded index of biological integrity. King County's website for Kelsey Creek also accessed on January 21, 2021 indicates water quality and habitat are degraded for a number of other water quality parameters including nutrients and suspended solids. Pollutants found in stormwater runoff contribute to this degradation, which is not surprising considering 86% of the basin consists of developed land uses and only 12% of the lands in the basin remain forested.

2.0 PROPOSED VEGETATION MANAGEMENT

By law City Light is required to manage vegetation within transmission line ROWs in a way that ensures the safe and reliable delivery of electricity. This means that trees must be prevented from growing into or contacting the lines to avoid power outages, fires, and other hazards. In general, City Light follows "wire zone-border zone" concept, as recommended by the American National Standard Institute (ANSI) A300 (Part 7), for managing ROW vegetation (ANSI 2006). The wire zone for the Eastside Line extends 33.5 feet on either side of the center line and includes the 17.5 feet-wide area beneath the tower arm and wires and an additional 16 feet

beyond the edge of the energized conductor. The border zone extends from the edge of the wire zone to the outer edge of the established ROW (Figure 1-7).

Allowable tree heights within the ROW and border zones are shown in Figure 1-8. City Light proposed vegetation management is to selectively remove invasive species and fast-growing hardwoods. Most of this work would be done by hand as noted in Table 1-1 above. This would result in temporary changes to vegetation structure and minimize potential impacts to critical area functions. Temporary changes to vegetation structure would be short lived as most vegetation management involves the cutting of fast-growing deciduous species that resprout (e.g., willows and black cottonwood).

2.1 Regulatory Background for Vegetation Management

Regulations governing the reliable transmission of power are developed by the North American Electric Reliability Corporation (NERC) at the federal level and enforced by the Western Electricity Coordinating Council (WECC) at a regional level. Power outages caused by whole trees or tree limbs falling on or into transmission lines are common. Over the last few years, high winds causing trees to fall on or into conductors that have started devastating wildfires in California. A joint U.S.-Canada Power System Outage Task Force (Task Force) investigating the causes of past power outages concluded that one of the four primary causes was inadequate vegetation management (Federal Energy Regulatory Commission [FERC] 2004). As a result, the NERC developed new standards for transmission vegetation management programs (TVMPs), in effect as of April 7, 2006, that were intended to improve the reliability of electric transmission systems by:

- Preventing outages from vegetation located on ROWs;
- Minimizing outages from vegetation adjacent to ROWs
- Maintaining clearances between transmission lines and vegetation on and along transmission ROW; and
- Universal reporting of vegetation-related outages of the transmission systems to the respective regional reliability organizations (RROs) and NERC.

The new standards for reporting categorize an outage as one of the following:

Category 1 — Grow-ins**:** Outages caused by vegetation growing **into** lines from vegetation inside and/or outside of the ROW;

Category 2 — Fall-ins: Outages caused by vegetation falling into lines from **inside** the ROW;

Category 3 — Fall-ins: Outages caused by vegetation falling into lines from **outside** the ROW.

Vegetation management is one of 83 reliability standards enforced by the NERC and WECC. As of June 2007, penalties for non-compliance with one or more of the standards range from sanctions that impose limitations or restrictions on activities; remedial action directives designed

to correct conditions, practices or other actions posing a threat to reliability; and fines of $1,000 to $1 million per day (NERC 2007).

Information from the literature suggests that trees growing into power lines (Category 1) account for less than 15 percent of all tree-related outages. The numbers of trees capable of striking

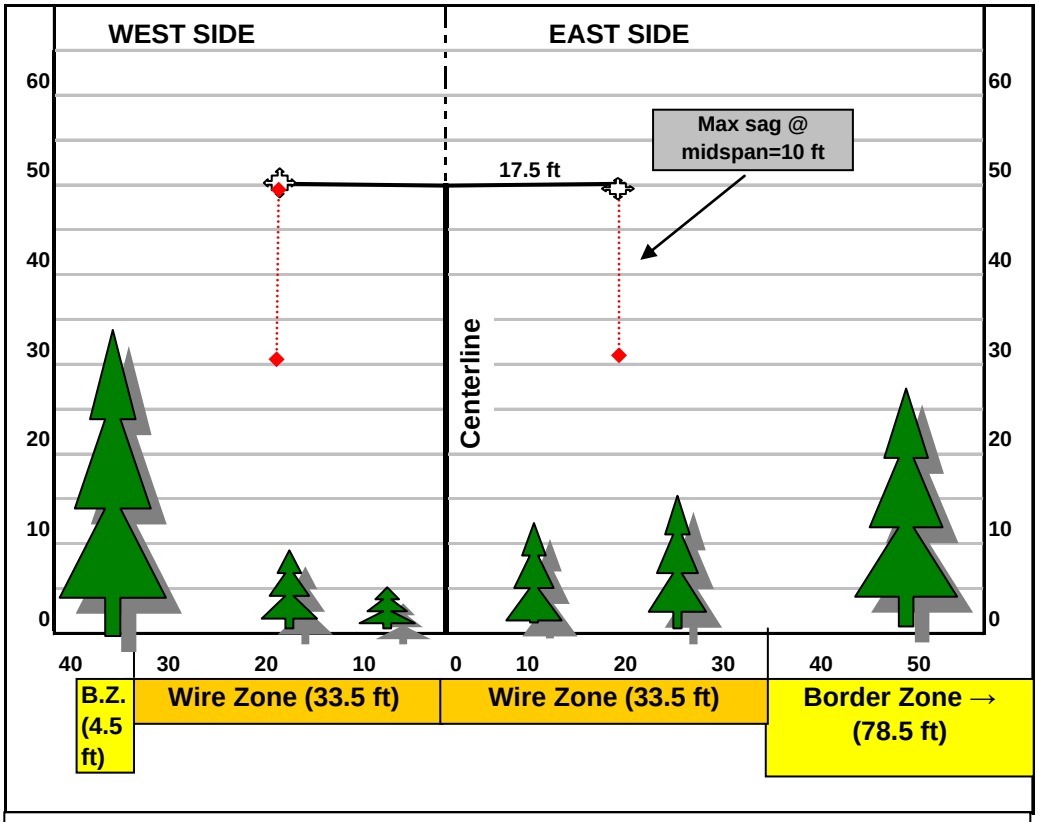

Figure 1-7. Wire (orange) and border (yellow) zones along the 230-kV transmission line through Bellevue (units in feet).

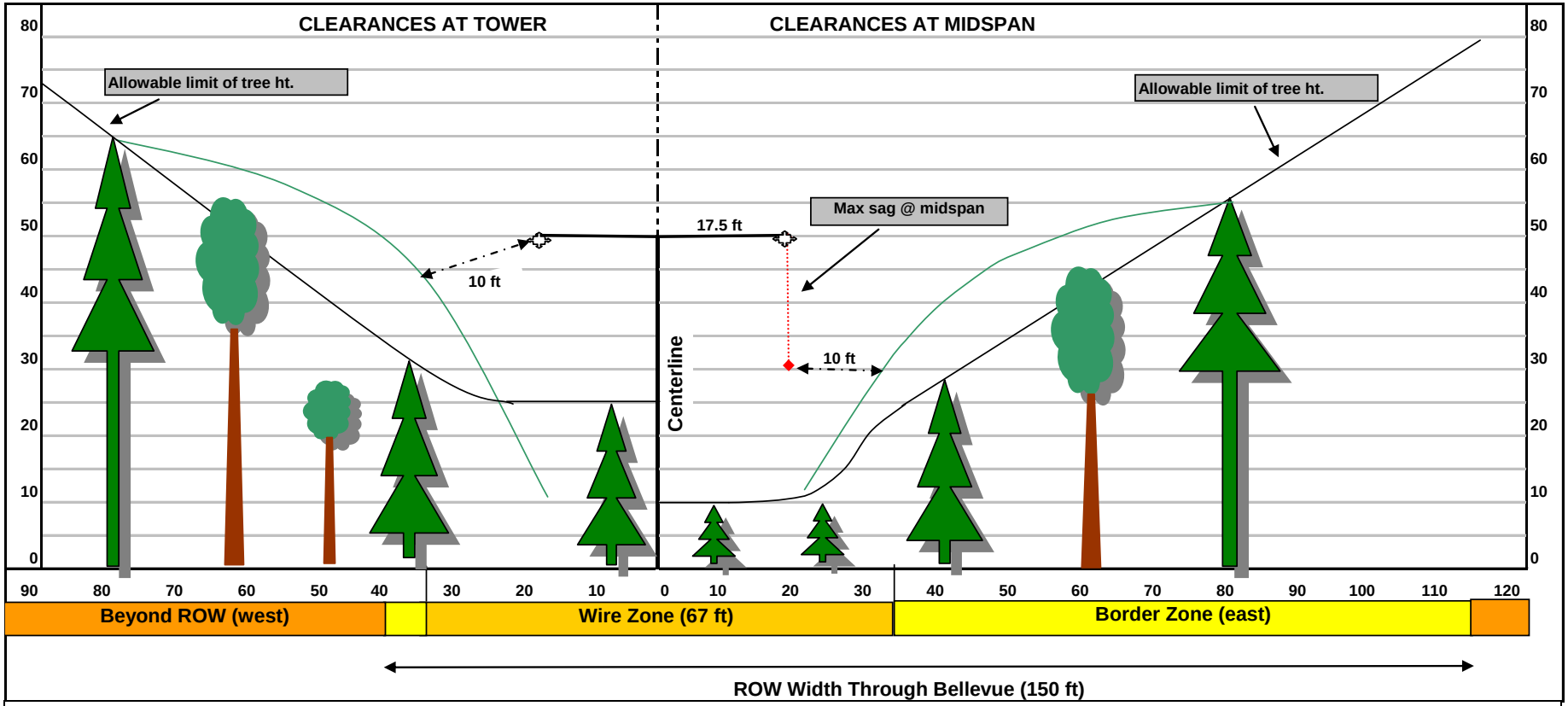

Figure 1-8. Allowable tree height limits along a 230 kV transmission line ROW and border zones (units are in feet).

power lines from outside the ROW (Category 3) overwhelm the numbers of trees on the ROW and are typically the cause of most outages, particularly under severe weather conditions (Guggenmoos 2001, 2003).

City Light is required to implement the NERC standards for maintaining electric transmission reliability and reducing power outages. These standards are the basis for vegetation management and reporting within City Light's easements. Vegetative management includes identifying high risk trees (living and dead) which have high potential to fail and endanger powerlines. Consequently, City Light must have:

> (1) clear guidelines for vegetation management activities which their vegetation maintenance staff and crews can easily understand, explain, and implement;
>
> (2) reasonable inspection schedule and tree removal approval timeframes with Bellevue to efficiently protect the transmission line, schedule work crews, and be responsive after impacts from storm events;
>
> (3) procedures and communication protocols that allow the utility to respond to emergencies and to remove trees that represent an imminent hazard to the transmission lines because they are dead, dying, diseased, cracked, split, or leaning over the line or into the wire zone; and
>
> (4) the ability to remove small trees within the wire zone before they become significant trees. This does not refer to all small trees, but to those species considered unsuitable because they have a mature height incompatible with conductor clearance requirements.

2.2 Goals, Objectives, and Best Management Practices

City Light's existing TVMP establishes Best Management Practices (BMP) to guide routine and emergency vegetation management within the ROW for City Light's Eastside Line. The intent of the TVMP is to provide a basis for communication between City Light and the City of Bellevue so that vegetation management activities are coordinated between the two parties and that any environmental issues are appropriately addressed. The TVMP establishes goals and objectives for managing vegetation within the ROW; defines specific activities and BMPs to meet these goals and objectives; and describes coordination between City Light, the City of Bellevue, and Bellevue residents with property in and along the ROW. The goals and objectives below are excerpted from the TVMP.

2.2.1 Goals and Objectives

To meet the purpose and intent of this Plan, City Light's vegetation management activities will be guided by the following general goals and objectives.

> **Goal 1**. Promote the establishment and maintenance of vegetation within the transmission ROW that is compatible with the continued delivery of electricity in a safe, reliable, and economically effective manner.

Objective 1a: Manage vegetation in the transmission corridor in a way that promotes low-growing tree, shrub, and grass/forb communities appropriate to the surrounding area.

Objective 1b: Replace trees removed from the ROW with tree and shrub species that are compatible with the transmission line and land uses in the ROW.

Goal 2. Protect resources in identified Critical Areas, parks, and designated open space that are bisected by the ROW.

***Objective 2a*:** Manage vegetation in a way that protects fish and wildlife habitat along streams and in wetlands and in associated buffers.

Objective 2b: Manage vegetation in a way that protects soil structure and stability on steep slopes.

Objective 2c: Minimize erosion and the establishment and spread of noxious weeds in site with ground disturbance resulting from vegetation management or transmission line maintenance.

Goal 3. Coordinate annual vegetation management activities along the ROW through Bellevue with the City of Bellevue, residents with property in and along the ROW, and state and federal agencies as needed.

Objective 3a: Meet with the City of Bellevue, Parks and Community Services Department, at the beginning of each year to discuss planned management schedule and activities along the ROW.

Objective 3b: Notify private landowners along the ROW prior to tree removal activities on their land.

Objective 3c: Develop and implement a process to review this Plan every four years, and revise and update as necessary.

Objective 3d: Comply with all applicable local, state, and federal environmental regulations.

2.3 Roles and Responsibilities

Ongoing planning and coordination between City Light and the City of Bellevue will be facilitated by the establishment of clear roles and responsibilities for each party. Implementation of the Plan is the responsibility of City Light; however, the City of Bellevue will have a continuing role in coordination and updates to the TVMP, as applicable.

2.3.1 Seattle City Light

- Plans and conducts vegetation maintenance along the ROW.
- Coordinates with the City of Bellevue on planning and scheduling vegetation management activities, updating maps of priority species, and developing any site-specific measures needed to protect resources in Critical Areas, parks, or designated open space.
- Implements identified site-specific measures to protect resources in Critical Areas, parks, and designated open space.
- Provides vouchers for replacing trees that are removed from within and along the ROW.
- Works with the City of Bellevue to update the TVMP as necessary, including Critical Area, Park, and Designated Open Space maps.
- Prepares and submits reports on herbicide application, as required by the Washington State Department of Agriculture.

2.3.2 City of Bellevue Parks and Community Services Department

- Ensures that tree and shrub species planted within the ROW on City of Bellevue property are compatible with the transmission line.
- Maintains all trees and shrubs planted by the City of Bellevue Parks and Community Services Department within the ROW through Wilburton Hill Park at a height < 15 feet or reimburses City Light to trim or remove the vegetation per the easement for this location.
- Coordinates with the City Light annually on planning and scheduling vegetation management activities and the development of any site-specific measures needed to protect resources in Critical Areas, parks, or designated open space.
- Coordinates with City Light on vegetation management activities at sites within the ROW that could potentially complement wildlife habitat and native plant restoration objectives for areas near the transmission corridor.
- Provides City Light with periodic updates to lists of priority wildlife species within the ROW through Critical Areas, parks, and designated open space.
- Participates with City Light in the periodic updates of the Plan.

2.4 BMPs for Vegetation Management

City Light follows a set of standard BMPs for vegetation clearance, regardless of location. Implementation of other BMPs depends on site conditions.

2.4.1 Standard BMPs

Standard BMPs for clearance and side-pruning in urban and residential areas include the following

- Property owners will be notified prior to clearance activities and provided with the rationale for the need for clearance. Property owners will also be notified if City Light expects to use herbicide to prevent deciduous tree re-growth.

- Small trees and shrubs will be cut to the ground in urban and residential areas with stumps left in place an < 2 inches high) to avoid being a trip hazard.

- Slash will be removed from the site, unless otherwise requested by the property owner. This material will be moved to the chipper in way that minimizes damage to nearby vegetation.

- Stumps of all cut hardwood tree and large shrub species will be treated to prevent re-growth using Pathfinder 2 (active ingredient triclopyr) unless otherwise requested by the property owner, or within a wetland or 25 feet of a stream. Stumps will be treated as soon as practical following cutting, with herbicide applied to the outermost bark ring and the remaining trunk and root collar. Application will be by backpack sprayer and will be consistent with label instructions and standard work practices.

- Trees will be pruned following ANSI A300 (Part 1) standard practices, which include using the minimum number of cuts needed to accomplish the objective; considering the natural structure of the tree; and cutting to the laterals or parent branch. Cedar branches will be feathered instead of blunt cut. Articulated mower heads will not be used for side-pruning.

2.4.2 BMPs for Work in Critical Areas, Parks, and Designated Open Space

Additional BMPs for ROW vegetation clearance and side-pruning in Critical Areas, parks, and designated open space include the following:

- With the exception of mowers, vehicle use will be confined to existing roads and trails.

- Mowers will be set at a height that does not remove vegetation to ground level or significantly disturb the soil.

- Removal of vegetation other than trees and shrubs identified for clearance will be minimized. Crews will strive for minimal disturbance of native vegetation to reach the fast-growing deciduous saplings and trees designated for removal.

- Slash that remains on site will be lopped and scattered. Slash that cannot be moved to the chipper without damaging nearby vegetation will be lopped and scattered.

- Herbicide will not be used to treat cut stumps of brush in wetlands, within 25 feet of streams, or during the rainy season (November – April).

Proposed work is scheduled for the third quarter of 2021 and may extend into the fourth quarter. The earliest work is likely to begin is July. Conducting work during this time avoids impacts to nesting songbirds, which have fledged except perhaps for those species that may raise multiple broods in a single year.

2.5 Mitigation

Utilities, including City Light, do not typically mitigate for routine vegetation management as impacts to canopy cover and ecological processes are minimal. Proposed vegetation management within critical areas described herein will result in minor, short-term changes in vegetation structure as has been documented by City Light's monitoring under the last cycle of routine vegetation management work completed in 2017. This and future cycles of routine vegetation management also are unlikely to result in more than minimal, short-term impacts on critical area vegetation structure and unmeasurable impacts on associated functions and values. Consequently, no mitigation or restoration appears warranted and none is proposed.

2.6 Plan Implementation Summary

As indicated in the existing City Light TVMP (Bellevue files), there are four separate but inter-related programs, each dealing with a specific aspect of ROW vegetation management:

- Annual Hazard Tree Inspection and Management

- Routine ROW Inspection and Clearance

- Emergency Inspection and Response

- Planning and Coordination

These separate but interrelated programs are incorporated here by reference.

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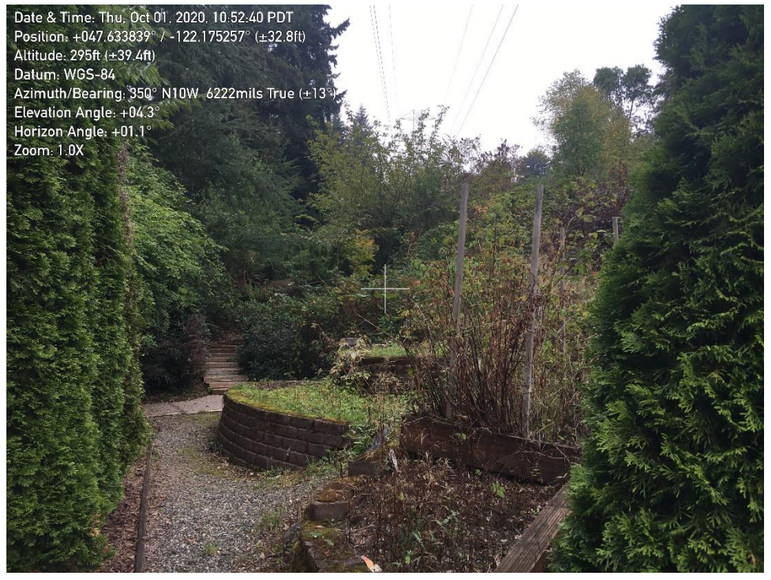
APPENDIX A - SITE PHOTOGRAPHS



Near Tower B15/17S Looking north under lines towards tower and Douglas fir to be side trimmed at 12346 26th Pl.

Near Tower B15/17S Looking north from the north end of NE 24th St. at fast-growing, deciduous saplings growing under lines.

B17/15S – Lake Hills Connector Looking north at fast-growing, deciduous saplings growing under lines.

B17/15S – Lake Hills Connector Looking north at fast-growing, deciduous saplings growing under lines.

B19/28S Looking north at Himalayan blackberry along the access route to the tower.

B19/28S Looking north at Himalayan blackberry and other non-native species on the access route to the tower.

Tower B17/7S (Wilburton) Dense Himalayan blackberry to be removed from around tower.

Tower B18/19S Dense Himalayan blackberry to be removed from around tower and sweetgum tree canopy reduction (left background).

Tower B18/27S Dense Himalayan blackberry to be removed from around tower and reduce crowns of two Leyland cypress

APPENDIX B - HAZARD TREE RATING FORM

SCL HAZARD TREE ASSESSMENT FORM **Date:**

Tree #: _____ **DBH:** _____ **Height:** _____
Species: _____ **# of Trunks:** _____

Hazard Level 1 (check all that apply)

	Completely dead
	Partially dead
	Cracks or splits in the trunk or major branches
	Leaning at >20 degree angle
	Evidence of disease - loose or cracked bark
	Evidence of disease-decay
	Evidence of disease-cankers encompassing more than half the tree circumference
	Evidence of disease-conks or mushroom bracts
	Evidence of disease-infestation by ants, termites, or boring insects
	Evidence of disease-within, yellowish (necrotic) foliage
	Obviously weak or diseased root system
	Apparently healthy Douglas-fir but within 15 ft of a tree with laminated root rot

Hazard Level 2 (check all that apply)

	Defective branches;
	Cavities and holes;
	Forks, crooks, spike branches, or multiple stems; or
	Evidence of minor root system decay

Comments:

APPENDIX C - PROPOSED VEGETATION MANAGEMENT NOTIFICATION SIGN

NOTICE

SEATTLE City Light HAS CONDUCTED AN ASSESSMENT IN THIS AREA AND HAS IDENTIFIED TREES THAT REPRESENT A HAZARD TO THE OVERHEAD TRANSMISSION LINES

CREWS WILL BE REMOVING THESE TREES BETWEEN:

_____

AND

_____

QUESTIONS? PLEASE CALL _____
(206) –

APPENDIX D - COMPATIBLE NATIVE TREE AND SHRUBS SPECIES FOR REPLACEMENT PLANTING

NATIVE SHRUBS SUITABLE FOR WIRE-BORDER ZONE PLANTING

Wire Zone: Low Shrubs (<15 feet)		**Border Zone: Tall Shrubs & Small Trees (16-35 feet)**	
Species for Mesic Sites	**Height at Maturity***	**Species for Mesic Sites**	**Height at Maturity**
Kinnikinnick *Arctostaphylos uva-ursi*	<1	Vine maple *Acer circinatum*	22
Redstem ceanothus *Ceanothus sanguineus*	10	Serviceberry *Amelanchier alnifolia*	16
Snowbrush *Ceanothus velutinus*	10	Indian plum *Oemleria cerasiformis*	16
Beaked hazelnut *Corylus cornuta*	13	Cascara *Phamnus purshiana*	33
Salal *Gaultheria shallon*	10	Pacific rhododendron *Rhododendron macrophyllum*	26
Oceanspay *Holodiscus discolor*	13	**Species for Wet to Moist Sites**	
Dull Oregon-grape *Mahonia nervosa*	2	Red-osier dogwood *Cornus sericea*	20
False box *Pachistima myrsinites*	3	Black hawthorn *Crataegus douglasii*	33
Mock-orange *Philadelphus lewisii*	10	Hooker's willow *Salix hookeriana*	20
Red-flowering currant *Ribes sanguineum*	10	Sitka willow *Salix sitchensis*	26
Sticky currant *Ribes viscosissimum*	6	Red elderberry *Sambucus racemosa*	20
Dwarf rose *Rosa gymnocarpa*	4		
Thimbleberry *Rubus parvilflora*	10		
Trailing blackberry *Rubiis ursinus*	<2		
Mountain ash *Sorbus sitchensis*	13		
Common snowberry *Symphoricarpus alba*	6		
Alaska blueberry *Vaccinium alaskensis*	6		
Black huckleberry *Vaccinium membranaceum*	5		
Red huckleberry *Vaccinium parvifolium*	13		
Evergreen huckleberry *Vaccinium ovatum*	13		
Species for Wet to Moist Sites			
Black twinberry *Lonicera involucrata*	10		
Fools huckleberry *Menziesia ferruginea*	10		

Wire Zone: Low Shrubs (<15 feet)		**Border Zone: Tall Shrubs & Small Trees (16-35 feet)**	
Nootka rose *Rosa nutkana*	10		
Devil's club *Oplopanax horridus*	10		
Pacific ninebark *Physocarpus capitatus*	13		
Black swamp gooseberry *Ribes lacustre*	6		
Stink currant *Ribes bracteosum*	10		
Salmonberry *Rubus spectabilis*	13		
Hardhack *Spirea douglasii*	6		
Dwarf blueberry *Vaccinium caespitosum*	<1		
Highbush-cranberry *Vibernum edule*	10		